

REMARKS/ARGUMENTS

Reconsideration of this application in light of the above amendments and following comments is courteously solicited.

The claims of the instant application have been restricted to a process for preparing a corrosion-resistant, chromate free, coating on magnesium or a magnesium alloy substrate and a resulting article prepared in accordance with the process. It is respectfully submitted that independent claim 7 and dependent claims 3, 5, 6, 8, 9 and 10 which depend therefrom are patentable over the prior art references cited by the examiner in the office action dated May 24, 2005 for the reasons set forth hereinbelow.

Initially, Applicants file concurrently herewith a Terminal Disclaimer and a Statement of Ownership in accordance with MPEP Section 706.02(e) (2) so as to remove the Briles publication 2003/0150525 as an effective prior art reference under 35 U.S.C. 103(c). In light of the foregoing submission, it is respectfully submitted that the examiner's rejections as set forth in paragraph Nos. 3, 4 and 7 of the office action dated May 24, 2005 are rendered moot.

With regard to the examiner's rejection of previously filed independent claim 1 under 35 U.S.C. 103 as being unpatentable over Matsushima in view of Oppen et al., Applicants respectfully submit that this rejection is rendered moot in light of the

cancellation of independent claim 1.

Thus, the only rejection which is relevant to newly presented independent claim 7 is the rejection set forth in paragraph 8 of the examiner's office action of May 24, 2005. In that rejection the examiner rejected previously submitted claims 1, 3 and 5-10 under 35 U.S.C. 103 as being unpatentable over Bengston 6,692,583 in view of Tomlinson 5,380,374. Applicants respectfully traverse this rejection for the reasons set forth hereinbelow.

The primary reference to Bengston et al. discloses a magnesium conversion coating composition and method of using same. In accordance with the Bengston et al. patent the conversion coating composition comprises a source of vanadate ions, a material comprising phosphorus, and nitric acid or a source of nitrate ions. This composition is significantly different from that used in the process of the present invention. Firstly, the Bengston et al. reference requires nitrate ions in a solution. In the claimed solution in the process of the present invention, nitrate ions are not employed in the solution. Secondly, and more importantly, the Bengston et al. reference does not teach or suggest a solution which contains an organophosphonic acid and, particularly, nitrilotris (methylene) triphosphonic acid. In order to cure the deficiencies of the primary reference, the examiner has relied

on the secondary reference to Tomlinson, U.S. Patent 5,380,374.

It is respectfully submitted that the secondary reference to Tomlinson fails to cure the deficiencies of the primary reference. The Tomlinson's coating bath contains dissolved titanium, zirconium and hafnium. A fair reading of the Tomlinson reference clearly indicates that the invention in Tomlinson is based on incorporated these metals (titanium, zirconium, and hafnium) into their coating. Such is not the case in the process of the present invention. Furthermore, Tomlinson's coating bath does not disclose the use of vanadate corrosion inhibitors. While Tomlinson does include in the bath nitrilotris (methylene) triphosphonic acid, this is included as a "crystal deformation agent". The crystals being produced in the Tomlinson bath are those which contain the titanium, zirconium or hafnium discussed above. The use of the organophosphonic acid in the Tomlinson document is to promote the crystals of titanium, zirconium or hafnium. Contrary to the foregoing, in the process of the present invention the organophosphoric acid promotes interaction of vanadium with the corrosion coating. Clearly this interaction can not be suggested in the Tomlinson reference as the Tomlinson reference does not use vanadate corrosion inhibitors. Thus, if one were to employ the teachings of Tomlinson into the primary reference as proposed by the examiner, one would need to include titanium,

zirconium and hafnium and the organophosphonic acids to form the crystals of titanium, zirconium or hafnium. Clearly from a fair reading of the references, one would not be led to a process in accordance with the present invention wherein the organophosphonic acid is employed to promote interaction of vanadium with the corrosion coating on magnesium. Accordingly, it is respectfully submitted that the examiner's rejection as it might apply to amended independent claim 7 is improper under 35 U.S.C. 103.

Finally, Applicants have, by the instant amendment, amended previously submitted claim 10 so as to comply with 35 U.S.C. 112, second paragraph and has added new claim 11 which sets forth the preferred ranges for phosphate ions and fluoride ions. Finally, Applicants have added new claim 12 which sets forth the pH of the solution. In this regard, it should be noted that the pH of the solution in Bengston is 1 to 4 which is outside of the range of the pH claimed in independent claim 12. Support for newly presented claim 12 may be found in paragraph [0011] lines 8 and 9 of the published instant application.

In light of the foregoing, it is submitted that all of the claims as pending patentably define over the art of record and an early indication of same is respectfully requested.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and

place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims as amended herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

Please charge Deposit Account No. 21-0279 in the amount of \$130.00 for filing the Terminal Disclaimer.

If any additional fees are required in connection with this case, it is respectfully requested that they be charged to Deposit Account No. 21-0279.

Respectfully submitted,

Xia Tang et al.



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I, Rachel Piscitelli, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on August 24, 2005.

